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EXAMINER

COBY, FRANTZ

ART UNIT	PAPER NUMBER
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2161

DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/845,839

**Applicant(s)**

JOHNSON ET AL.

**Examiner**

Frantz Coby

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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This is in response to Applicant's response filed on September 15, 2004 in which claims 1-30 are presented for examination.

**Status of Claims**

Claims 1-30 are pending.

***Response to Arguments***

Applicant's arguments filed on the aforementioned date above have been fully considered but they are not persuasive. Therefore the rejection of claims 1-30 under sections 102 and 103 mailed on June 17, 2004 remains.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-8, 13-22, 26-28 are rejected under 35 U.S.C. 102(e) as being anticipated by MacLeod US 2002/0166038.

As per claims 1, 21, MacLeod discloses, "a method for validating a storage device, the method comprising: storing discovery information relating to a storage device" by providing a cache validation mechanism (See MacLeod Figure 2, component 2, Pages 3-4, sections 0034-0039) where entries are stored in the I/O virtual address cache memory including ID field (Figure 2, component 41). In particular, MacLeod discloses the claimed limitations of querying said storage device for device identification information, and comparing at least a portion of returned device identification information to at least a portion of said stored discovery information" (See MacLeod Page 2, Section 0027., Page 3, section 0031).

As per claim 2, most of the limitations of this claim have been noted in the rejection of claim 1. Applicant's attention is directed to the rejection of claim 1 above. In addition, MacLeod discloses claimed feature of "wherein said at least a portion of said stored discovery information includes device and host bus adapter information" as a bus slot number (See MacLeod Page 2, Section 0028).

As per claim 3, most of the limitations of this claim have been noted in the rejection of claim 1. Applicant's attention is directed to the rejection of claim 1 above. In addition, MacLeod discloses the claimed feature of "wherein said stored discovery information is obtained through at least one small computer system interface (SCSI) inquiry" by providing a local bus used for interfacing a peripheral device with the

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computer system 4 (See MacLeod Page 2, component 0017', Page 4, Sections 0042-0043).

As per claim 4, most of the limitations of this claim have been noted in the rejection of claim 2. Applicant's attention is directed to the rejection of claim 2 above. In addition, Macleod discloses the claimed feature of "wherein said stored discovery information is obtained through at least one element selected from the group consisting of: at least one system file', at least one system registry; and combinations thereof through the Microsoft Windows 2000 registry file (See MacLeod Pages 4-5, Section 0048).

As per claim 5, most of the limitations of this claim have been noted in the rejection of claim 2. Applicant's attention is directed to the rejection of claim 2 above. In addition, Macleod discloses the claimed feature of '\$ wherein said stored discovery information is obtained through at least one element selected from the group consisting of operating system kernel application programming interface call" (See MacLeod Windows Operating System, Pages 4-5, Section 0048)., host bus adapter device driver library application programming interface; and some combination thereof as a PCI Bus (See MacLeod Pages 4-5, Section 0048).

As per claims 6-8 and 22, most of the limitations of these claims have been noted in the rejection of claims 1 and 21. Applicant's attention is directed to the rejection of

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claims 1 and 21 above. In addition, Macleod discloses the claimed feature of "wherein said at least a portion of said returned device identification information includes Product ID, Vendor ID, and Product Revision information" as an identifier or tag bits (See MacLeod Page 2, Section 0027); "wherein said returned device identification information includes standard device inquiry information" as inquiry for reading and writing (See MacLeod Page 2, Section 0027),. "wherein said stored discovery information includes device address information" (See MacLeod Page 2, Section 0026).

As per claim 13, most of the limitations of this claim have been noted in the rejection of claim 1 . Applicant's attention is directed to the rejection of claim 1 above. In addition, Macleod discloses the claimed feature of "wherein said querying includes at least one small computer system interface (SCSI) inquiry" by providing a local bus used for interfacing a peripheral device with the computer system 4 (See MacLeod Page 2, component 0017', Page 4, Sections 0042-0043).

As per claims 14, 26 most of the limitations of these claims have been noted in the rejection of claims 1 and 21 . Applicant's attention is directed to the rejection of claims 1 and 21 above. In addition, Macleod discloses the claimed feature of "wherein said method further includes flagging said stored discovery information if said at least a portion of said returned information does not match said at least a portion of said stored discovery information" as an invalid entry error (See MacLeod Page 3, Section 0034).

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As per claims 15-16, 27-28, most of the limitations of these claims have been noted in the rejection of claims 14 and 26. Applicant's attention is directed to the rejection of claims 14 and 26 above. In addition, Macleod discloses the claimed feature of "wherein said method further comprises: deleting or updating said stored discovery information if said stored discovery information is flagged; "wherein said storing discovery information includes storing discovery information on a host system and a storage management system, and wherein said deleting or discovery information includes deleting or updating said discovery information stored at said host system and at said storage management system" (See MacLeod Page 3, Section 0034).

As per claims 17-20, most of the limitations of these claims have been noted in the rejection of claim 9. Applicant's attention is directed to the rejection of claim 9 above. In addition, Macleod discloses the claimed feature of 'd wherein said deleting or updating said stored discovery information stored at said host system further comprises' transmitting an event to said storage managements system requesting said storage management system to delete or update said discovery information stored at said storage management system; "wherein said method further comprises; storing said returned information as a new device; "wherein said method further comprises: communicating an event requesting the addition of said returned information or an update of previous information using said returned information; wherein said method further comprises: preventing communication between a storage management system

and said device during said storing said returned information as a new device" (See MacLeod Page 3, Section 0034).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9-12, 23-25, are rejected under 35 U.S.C. 103(a) as being unpatentable over MacLeod US 2002/0166038 A1.

As per claims 9-11, 23-24, most of the limitations of this claim have been noted in the rejection of claims 6-8. Applicant's attention is directed to the rejection of claims 6-8 above. In addition, Macleod discloses the claimed feature of "flagging said stored discovery information if said determined claimed address information does not match said stored claimed address information" as an invalid entry error (See MacLeod Page 3, Section 0034)\*, "wherein said stored discovery information further includes serial number information for said storage device, and wherein said method further comprises; querying said storage device for serial number information for said device', and comparing said serial number information received in response to said serial



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number information query to said stored serial number information" (See Macleod Page 2, Section 0027., Page 3, section 0031).

Although MacLeod disclosed determining address information for storage device and comparing address information to stored address information.

It is noted however, MacLeod did not specifically detail the aspect of determining claimed address information for said storage device; and comparing said determined claimed address information to said stored claimed address information" as recited in the instant claim 9.

One of ordinary skill in the art at the time of the invention would have found it obvious to substitute the address information stored in the storage device with claimed address information. The motivation being to have enhanced the versatility of the caching mechanism of MacLeod by allowing it to more efficiently validate storage devices and provide a level of fault tolerance', thus, providing an determining claimed address information for storage devices', and comparing the determined claimed address information to the stored claimed address information.

As per claims 12, 25 most of the limitations of this claim have been noted in the rejection of claim 9. Applicant's attention is directed to the rejection of claim 9 above. In addition, Macleod discloses the claimed feature of "wherein said method further comprises'. querying said storage device for serial number information for said device" (See Macleod Page 2, Section 0027', Page 3, section 0031 ) and "accepting said stored

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device address information as valid if an error is returned in response to said query" as an invalid entry error (See MacLeod Page 3, Section 0035', Page 3, Section 0034).

Claims 29-30, are rejected under 35 U.S.C. 103(a) as being unpatentable over MacLeod US 2002/0166038 A1 in view of Blumenau U.S. Patent no. 6,263,445.

As per claims 29-30, most of the limitations of these claims have been noted in the rejection of claims 1 and 21 . Applicant's attention is directed to the rejection of claims 1 and 21 above. In addition, MacLeod discloses "a system for the validation of at least one storage device address (See MacLeod Abstract).

It is noted, however, MacLeod did not specifically detail the aspect of having one host agent process as recited in the instant claim 29. On the other hand, Blumenau provides a computer system having at least one host agent including a validation mechanism (See Blumenau Abstract', Figures 3 and 6).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the data management storage system of MacLeod by placing it in the network environment provided by Blumenau. One of ordinary skill in the art at the time of the invention would have been motivated to do so because that would have ensured that data was not corrupted during the data transfer.

**Remarks**

The Applicant argued, "The disclosure of Macleod fails to anticipate claims 1 and 21. The Examiner asserts that the portion of MacLeod found at page 2, section 0027, discloses this feature of claims 1 and 21. However, the cited portion of MacLeod discloses an entry stored in the I/O virtual address (IOVA) cache memory that includes an identifying field known as tag bits. (MacLeod, page 2, section 0027). MacLeod also discloses that an I/O board constructs the tag bits from a portion of a logical address, and the I/O board inserts tag bits as part of the IOVA cache memory entry when updating a cache entry (MacLeod, page 2, section 0027). In addition, MacLeod teaches that the I/O board will compare tag bits of the cache memory to a predetermined portion of the logical address when reading a cache entry into the IOVA cache memory. (MacLeod, page 2, section 0027). However, the tag bits of MacLeod do not correspond to the claimed device identification information, as the tag bits are not related to device identification information. Thus, MacLeod fails to disclose all the elements of claims 1 and 21".

The Examiner, on the other hand, disagrees with the preceding argument because it seems that the Applicant partially read the (MacLeod, page 2, section 0027). In particular, what the Applicant's argument omits in the 0027 section is the critical teachings that the Input Output Virtual address includes an **identifying field**, namely, ("tag bits"). Further, the identifying information is compared to the logical address. In the technological art, when a comparison is achieved, there is always a command to trigger the comparing step to be achieved, which can be a read/write input command or

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a query. In the case of MacLeod, the step of comparing includes a querying which is achieved as a Request Read/Write Command (See MacLeod Figure 3, component 300; Page 3, Section 0030). As explained, above, MacLeod does disclose a means for querying a storage device for device identification and that the tag bits as an identifying field of MacLeod does correspond to the claimed device identification information since the tag bits is nothing but an identifying field storing (See MacLeod Page 2, Section 0027).

Claims 2-18, 13-20, 22 and 26-28 depend directly or indirectly from their respective base claims 1 and 21 and thereby inherit all of the limitations of their respective base claims. Accordingly, it is respectfully submitted that the dependent claims 2-8, 13-20, 22, and 26-28 are being anticipated by MacLeod US 2002/0166038 as explained above.

Claims 9-12 and 23-25 depend indirectly from base claims 1 and 21 respectively, and thus, inherit all limitations of their respective base claims 1 and 21. Therefore, MacLeod and the Examiner's assertion of obviousness does teach all the elements of claims 9-12 and 23-25, and, thus, claims 9-12 and 23-25 are obvious under 35 U.S.C. 103(a) as explained above. Thus, the rejection for claims 9-12 and 23-25 remains.

The rejection of claims 29 and 30 under 35 U.S.C. j 103 (a) as being unpatentable over MacLeod in view of Blumenau remains since a prima facie case of

obviousness under 35 U.S.C.103(a) is established as detailed in the rejection and remarks above.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frantz Coby whose telephone number is 571 272 4017. The examiner can normally be reached on Monday-Saturday 3:00PM-10:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 571 272 4023. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
**FRANTZ COBY**  
**PRIMARY EXAMINER**

August 11, 2005